

## DECLARATION FOR PATENT APPLICATION

As a below named inventor, I declare that I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

### **19 HUMAN SECRETED PROTEINS**

the specification of which was filed on **April 11, 2001** as Application Serial No **09/832,129**.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application, which designated at least one country other than the United States listed below, and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

<u>Priority Claimed</u>	
Yes	No

<u>(Number)</u>	<u>(Country)</u>	<u>(Day/Month/Year Filed)</u>
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I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

<u>60/163,085</u>	<u>November 2, 1999</u>
<u>(Application Serial No.)</u>	<u>(Filing Date)</u>
<u>60/172,411</u>	<u>December 17, 1999</u>
<u>(Application Serial No.)</u>	<u>(Filing Date)</u>

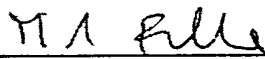
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<u>PCT/US00/28664</u>	<u>October 17, 2000</u>	<u>Pending</u>
<u>(Application Serial No.)</u>	<u>(Filing Date)</u>	<u>(Status: patented, pending, abandoned)</u>

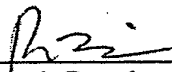
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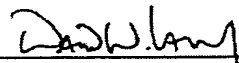
**Full name of first joint inventor:** Michele Fiscella

Inventor's signature:  Date: 1-10-02  
Residence: 6308 Redwing Road, Bethesda, MD 20817 Citizenship: IT  
Post Office Address: same as above

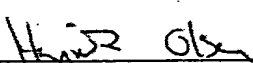
**Full name of additional joint inventor:** Ping Wei

Inventor's signature:  Date: 1-10-02  
Residence: 19100 Old Baltimore Road, Brookeville, MD 20833 Citizenship: CN  
Post Office Address: same as above


**Full name of additional joint inventor:** David W. LaFleur

Inventor's signature:  Date: 1/10/02  
Residence: 3142 Quesada Street, N.W., Washington, DC 20015 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Henrik S. Olsen

Inventor's signature:  Date: 1/10/02  
Residence: 182 Kendrick Place, #24, Gaithersburg, MD 20878 Citizenship: DK  
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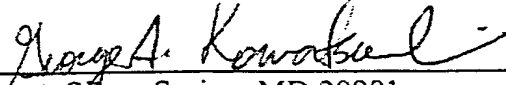
**Full name of additional joint inventor:** Kevin P. Baker

Inventor's signature:  Date: 1/10/02  
Residence: 14006 Indian Run Drive, Darnestown, MD 20878 Citizenship: GB  
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Full name of additional joint inventor: Reinhard Ebner

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 9906 Shelburne Terrace, #316, Gaithersburg, MD 20878 Citizenship: DE  
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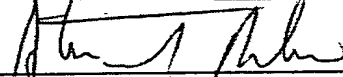
Full name of additional joint inventor: George A. Komatsoulis

Inventor's signature:  Date: 1/11/02  
Residence: 9518 Garwood Street, Silver Spring, MD 20901 Citizenship: US  
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Full name of additional joint inventor: Craig A. Rosen

Inventor's signature:  Date: 1/15/02  
Residence: 22400 Rolling Hills Road, Laytonsville, MD 20882 Citizenship: US  
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Full name of additional joint inventor: Steven M. Ruben

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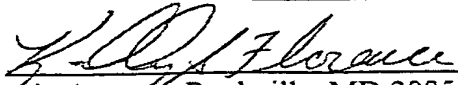
Full name of additional joint inventor: Roxanne D. Duan

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
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Full name of additional joint inventor: Paul E. Young

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Residence: 122 Beckwith Street, Gaithersburg, MD 20878 Citizenship: US  
Post Office Address: same as above

Full name of additional joint inventor: Kimberly A. Florence

Inventor's signature:  Date: 1/16/02  
Residence: 12805 Atlantic Avenue, Rockville, MD 20851 Citizenship: US  
Post Office Address: same as above

Full name of additional joint inventor: Paul A. Moore

Inventor's signature: Paul A Moore Date: 1/10/02  
Residence: 19005 Leatherbark Drive, Germantown, MD 20874 Citizenship: GB  
Post Office Address: same as above

Full name of additional joint inventor: Charles E. Birse

Inventor's signature: Charles E Birse Date: 1/8/02  
Residence: 13822 Saddlevue Drive, North Potomac, MD 20878 Citizenship: GB  
Post Office Address: same as above

Full name of additional joint inventor: Jian Ni

Inventor's signature: [Signature] Date: 1/10/02  
Residence: 5502 Manorfield Road, Rockville, MD 20853 Citizenship: CN  
Post Office Address: same as above

Full name of additional joint inventor: Daniel R. Soppet

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 15050 Stillfield Place, Centreville, VA 22020 Citizenship: US  
Post Office Address: same as above

Full name of additional joint inventor: Yanggu Shi

Inventor's signature: Yanggu Shi Date: 1/8/02  
Residence: 437 West Side Drive, Apt. 102, Gaithersburg, MD 20878 Citizenship: CN  
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Residence: 14006 Indian Run Drive, Darnestown, MD 20878 Citizenship: GB  
Post Office Address: same as above

Full name of additional joint inventor:

Reinhard Ebner

Inventor's signature: *[Signature]*

Date: 2/15/02

Residence: 9906 Shelburne Terrace, #316, Gaithersburg, MD 20878

Citizenship: DE

Post Office Address: same as above

Full name of additional joint inventor:

George A. Komatsoulis

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Residence: 9518 Garwood Street, Silver Spring, MD 20901

Citizenship: US

Post Office Address: same as above

Full name of additional joint inventor:

Craig A. Rosen

Inventor's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Residence: 22400 Rolling Hills Road, Laytonsville, MD 20882

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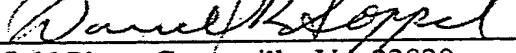
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Inventor's signature:  Date: 3/5/02  
Residence: 15050 Stillfield Place, Centreville, VA 22020 Citizenship: US  
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Post Office Address: same as above

**Full name of additional joint inventor:** Ping Wei

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**Full name of additional joint inventor:** David W. LaFleur

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Inventor's signature: Roxanne Duan Date: 1/9/02  
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Residence: 9906 Shelburne Terrace, #316, Gaithersburg, MD 20878 Citizenship: DE  
Post Office Address: same as above

**Full name of additional joint inventor:** George A. Komatsoulis

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 9518 Garwood Street, Silver Spring, MD 20901 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Craig A. Rosen

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 22400 Rolling Hills Road, Laytonsville, MD 20882 Citizenship: US  
Post Office Address: same as above

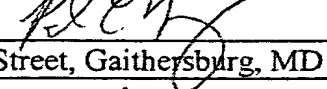
**Full name of additional joint inventor:** Steven M. Ruben

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 18528 Heritage Hills Drive, Olney, MD 20832 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Roxanne D. Duan

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 5515 Northfield Road, Bethesda, MD 20817 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Paul E. Young

Inventor's signature:  Date: 2/26/02  
Residence: 122 Beckwith Street, Gaithersburg, MD 20878 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Kimberly A. Florence

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 12805 Atlantic Avenue, Rockville, MD 20851 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Paul A. Moore

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 19005 Leatherbark Drive, Germantown, MD 20874 Citizenship: GB  
Post Office Address: same as above

**Full name of additional joint inventor:** Charles E. Birse

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 13822 Saddlevew Drive, North Potomac, MD 20878 Citizenship: GB  
Post Office Address: same as above

**Full name of additional joint inventor:** Jian Ni

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 5502 Manorfield Road, Rockville, MD 20853 Citizenship: CN  
Post Office Address: same as above

**Full name of additional joint inventor:** Daniel R. Soppet

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 15050 Stillfield Place, Centreville, VA 22020 Citizenship: US  
Post Office Address: same as above

**Full name of additional joint inventor:** Yanggu Shi

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence: 437 West Side Drive, Apt. 102, Gaithersburg, MD 20878 Citizenship: CN  
Post Office Address: same as above





MARCH 26, 2003

JANET M. MANTINEAU  
HUMAN GENOME SCIENCES, INC.  
9410 KEY WEST AVENUE  
ATTY. DKT.: PZ045P1  
ROCKVILLE, MD 20850

PTAS

**RECEIVED**

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Director of the United States Patent and Trademark Office  
Washington, DC 20231  
www.uspto.gov



\*102395632A\*

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KKT H O M SA  
HGS PATENT DEPT

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/22/2002

REEL/FRAME: 013510/0162  
NUMBER OF PAGES: 14

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

FISCELLA, MICHELE

DOC DATE: 01/10/2002

ASSIGNOR:

WEI, PING

DOC DATE: 01/10/2002

ASSIGNOR:

LAFLEUR, DAVID W.

DOC DATE: 01/11/2002

ASSIGNOR:

OLSEN, HENNK S.

DOC DATE: 01/10/2002

ASSIGNOR:

BAKER, KEVIN P.

DOC DATE: 01/10/2002

ASSIGNOR:

EBNER, REINHARD

DOC DATE: 03/05/2002

ASSIGNOR:

KOMATSOULIS, GEORGE A.

DOC DATE: 01/11/2002

013510/0162 PAGE 2

ASSIGNOR: ROSEN, CRAIG A.	DOC DATE: 01/15/2002
ASSIGNOR: RUBEN, STEVEN M.	DOC DATE: 01/10/2002
ASSIGNOR: DUAN, D. ROXANNE	DOC DATE: 01/09/2002
ASSIGNOR: YOUNG, PAUL E.	DOC DATE: 02/26/2002
ASSIGNOR: FLORENCE, KIMBERLY A.	DOC DATE: 01/16/2002
ASSIGNOR: MOORE, PAUL A.	DOC DATE: 01/10/2002
ASSIGNOR: BIRSE, CHARLES E.	DOC DATE: 01/08/2002
ASSIGNOR: NI, JIAN	DOC DATE: 01/10/2002
ASSIGNOR: SOPPEI, DANIEL R.	DOC DATE: 03/05/2002
ASSIGNOR: SHI, YANGGU	DOC DATE: 01/08/2002
ASSIGNEE: HUMAN GENOME SCIENCES, INC. 9410 KEY WEST AVENUE ROCKVILLE, MARYLAND 20850	
SERIAL NUMBER: 09832129	FILING DATE: 04/11/2001
PATENT NUMBER:	ISSUE DATE:

THERESA FREDERICK, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

03-25-2003

3-22-02

Form PTO-1595  
(Rev. 04/01)  
OMB No 0651-0027 (exp 5/31/2002)

102395632

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof

## 1. Name of conveying party(ies):

Michele Fiscella (January 10, 2002), Ping Wei (January 10, 2002), David W. LaFleur (January 11, 2002), Henrik S. Olsen (January 10, 2002), Kevin P. Baker (January 10, 2002).

Additional name(s) of conveying party(ies) attached?

☒ Yes ☐ No

## 3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: see Box 1, conveying parties

## 2. Name and address of receiving party(ies)

Name: Human Genome Sciences, Inc.

Internal Address:

Street Address:

9410 Key West Avenue

City: Rockville

State: MD

Zip: 20850

Additional name(s) &amp; address(es) attached:

☐ Yes ☒ No

## 4. Application number(s) or patent number(s)

If this document is being filed together with a new application, the execution date of the new application is:

A. Patent Application No.(s):

09/832,129

B. Patent No.(s):

Additional numbers attached?

☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Janet M. Martineau

HUMAN GENOME SCIENCES, INC.

Internal Address: Atty. Dkt.: P2045P1

Street Address: 9410 Key West Avenue

City:  
RockvilleState: Zip:  
MD 20850

## 6. Total number of applications and patents involved:

1

## 7. Total fee (37 CFR 3.41)

\$ 40.00

☐ Enclosed☒ Authorized to be charged to deposit account

## 8. Deposit account number

CHARGED 08-3425

(Attach duplicate copy of this page if paying by deposit account)

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## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Janet M. Martineau  
Name of Person Signing

Signature

March 22, 2002  
Date

Total number of pages including cover sheet, attachments, and documents: 14

Form PTO-1595 <span style="float: right;">RECORDATION FORM COVER SHEET (continued)</span>			
<b>Additional Conveying Party(ies) (1. Continued):</b>  Reinhard Ebner (March 5, 2002), George A. Komatsoulis (January 11, 2002), Craig A. Rosen (January 15, 2002), Steven M. Ruben (January 10, 2002), D. Roxanne Duan (January 9, 2002), Paul E. Young (February 26, 2002), Kimberly A. Florence (January 16, 2002), Paul A. Moore (January 10, 2002), Charles E. Birse (January 8, 2002), Jian Ni (January 10, 2002), Daniel R. Soppet (March 5, 2002), and Yanggu Shi (January 8, 2002)			
<b>Additional Assignees (2. Continued):</b>  <div style="margin-bottom: 10px;">           Assignee Name: _____            Internal Address: _____            Street Address: _____             City: _____ State: _____ Zip Code: _____         </div> <div style="margin-bottom: 10px;">           Assignee Name: _____            Internal Address: _____            Street Address: _____             City: _____ State: _____ Zip Code: _____         </div> <div>           Assignee Name: _____            Internal Address: _____            Street Address: _____             City: _____ State: _____ Zip Code: _____         </div>			
<b>Additional Applications and/or Patents (4. Continued):</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;">           Additional Patent Application Numbers            4A. Continued:         </td> <td style="width: 50%; vertical-align: top; padding: 5px;">           Additional Patent Numbers            4B. Continued:         </td> </tr> </table> <div style="text-align: center; margin-top: 20px;">           Additional numbers attached?           <input type="checkbox"/> Yes           <input checked="" type="checkbox"/> No         </div>		Additional Patent Application Numbers 4A. Continued:	Additional Patent Numbers 4B. Continued:
Additional Patent Application Numbers 4A. Continued:	Additional Patent Numbers 4B. Continued:		

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, Michele Fiscella, Ping Wei, David W. LaFleur, Henrik S. Olsen, Kevin P. Baker, Reinhard Ebner, George A. Komatsoulis, Craig A. Rosen, Steven M. Ruben, Roxanne D. Duan, Paul E. Young, Kimberly A. Florence, Paul A. Moore, Charles E. Birse, Jian Ni, Daniel R. Soppet, and Yangu Shi, hereby sells, assigns, transfers, and sets over to Human Genome Sciences, Inc. ("Assignee") having a place of business at 9410 Key West Avenue, Rockville, MD 20850, its successors, assigns and legal representatives, his/her entire right, title and interest, including the right to sue and collect for all past, present and future damages, for the United States of America, including all its territories and possessions, and all other countries,

- (a) in and to the invention known as 19 HUMAN SECRETED PROTEINS for which application for United States Letters Patent was filed on April 11, 2001, and assigned US Serial No. 09/832,129, in any and all applications thereon, in any and all Patent(s) therefore, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing (continuation, divisional) applications, reissues, extensions, renewals and reexaminations of the patent application or patent therefor listed above in part (a), to the full extent of the term or terms for which patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals, and examinations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

Each of the undersigned further agrees that said Assignee may apply for and receive patent(s) for said invention(s) in its own name; and agrees to execute all papers necessary in connection with said application(s) and any continuing application(s) (continuation, divisional, or continuation-in-part), substitutes, renewals, reissues, reexaminations, extensions, and all other patent applications on all such invention(s), including all rightful oaths, declarations, powers of attorney and other papers; and agrees to execute separate assignments in connection with such application(s) as the Assignee may deem necessary and expedient; and agrees to communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said invention(s) and the history thereof; and agrees to cooperate fully and completely with said Assignee, its successors, assigns, and representatives in securing, maintaining, and enforcing proper patent protection for said invention(s) and for vesting title to said invention(s) and all patent applications and all patents on said invention(s) in Assignee, its successors, assigns and representatives.

Each of the undersigned agrees to execute all papers necessary in connection with any interference that may be declared or litigation that may be instituted concerning the application(s) or patent(s) referred to above and to cooperate fully and completely with the Assignee, its successors, assigns, and representatives in obtaining evidence and going forward with such interference or litigation, including providing testimonial evidence.

Each of the undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned

Each of the Practitioners at Customer Number 22195 is hereby granted with full power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: Michele Fiscella Date: 1-10-02  
Michele Fiscella

Inventor's Signature: Ping Wei Date: 1-10-02  
Ping Wei

Inventor's Signature: David W. LaFleur Date: 1/1/02  
David W. LaFleur

Inventor's Signature: Henrik S. Olsen Date: 1/10/02  
Henrik S. Olsen

Inventor's Signature: Kevin P. Baker Date: 1/10/02  
Kevin P. Baker

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Reinhard Ebner

Inventor's Signature: George A. Komatsoulis Date: 1/11/02  
George A. Komatsoulis

Inventor's Signature: Craig A. Rosen Date: 1/15/02  
Craig A. Rosen

Inventor's Signature: Steven M. Ruben Date: 1/10/02  
Steven M. Ruben

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Roxanne D. Dunn

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul E. Young

Inventor's Signature: Kimberly A. Florence Date: 1/16/02  
Kimberly A. Florence

Inventor's Signature: Paul A Moore Date: 1/10/02  
Paul A. Moore

Inventor's Signature: Charles E. Birse Date: 1/8/02  
Charles E. Birse

Inventor's Signature:  Date: 1/8/02  
Jian Ni

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Daniel R. Soppet

Inventor's Signature: Yangu Shi Date: 1/8/02  
Yangu Shi

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, Michele Fiscella, Ping Wei, David W. LaFleur, Henrik S. Olsen, Kevin P. Baker, Reinhard Ebner, George A. Komatsoulis, Craig A. Rosen, Steven M. Ruben, Roxanne D. Duan, Paul E. Young, Kimberly A. Florence, Paul A. Moore, Charles E. Birse, Jian Ni, Daniel R. Soppet, and Yunggu Shi, hereby sells, assigns, transfers, and sets over to Human Genome Sciences, Inc. ("Assignee") having a place of business at 9410 Key West Avenue, Rockville, MD 20850, its successors, assigns and legal representatives, his/her entire right, title and interest, including the right to sue and collect for all past, present and future damages, for the United States of America, including all its territories and possessions, and all other countries,

- (a) in and to the invention known as 19 HUMAN SECRETED PROTEINS for which application for United States Letters Patent was filed on April 11, 2001, and assigned US Serial No. 09/832,129, in any and all applications thereon, in any and all Patent(s) therefore, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing (continuation, divisional) applications, reissues, extensions, renewals and reexaminations of the patent application or patent therefor listed above in part (a), to the full extent of the term or terms for which patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals, and examinations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

Each of the undersigned further agrees that said Assignee may apply for and receive patent(s) for said invention(s) in its own name; and agrees to execute all papers necessary in connection with said application(s) and any continuing application(s) (continuation, divisional, or continuation-in-part), substitutes, renewals, reissues, reexaminations, extensions, and all other patent applications on all such invention(s), including all rightful oaths, declarations, powers of attorney and other papers; and agrees to execute separate assignments in connection with such application(s) as the Assignee may deem necessary and expedient; and agrees to communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said invention(s) and the history thereof; and agrees to cooperate fully and completely with said Assignee, its successors, assigns, and representatives in securing, maintaining, and enforcing proper patent protection for said invention(s) and for vesting title to said invention(s) and all patent applications and all patents on said invention(s) in Assignee, its successors, assigns and representatives.

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Each of the undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

Each of the Practitioners at Customer Number 22195 is hereby granted with full power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s).

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Michele Fiscella

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ping Wei

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
David W. LaFleur

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Henrik S. Olsen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Kevin P. Baker

Inventor's Signature: \_\_\_\_\_ Date: 3/15/2002  
Reinhard Ebner

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
George A. Komatsoulis

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. Rosen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven M. Ruben

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Roxanne D. Duan

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul E. Young

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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul A. Moore

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Charles E. Birse

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jian Ni

Inventor's Signature: *Daniel R. Soppet* Date: 3/5/02  
Daniel R. Soppet

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yanggu Shi

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, Michele Fiscella, Ping Wei, David W. LaFleur, Henrik S. Olsen, Kevin P. Baker, Reinhard Ebner, George A. Komatsoulis, Craig A. Rosen, Steven M. Ruben, Roxanne D. Duan, Paul E. Young, Kimberly A. Florence, Paul A. Moore, Charles E. Birse, Jian Ni, Daniel R. Suppet, and Yanggu Shi, , hereby sells, assigns, transfers, and sets over to Human Genome Sciences, Inc. ("Assignee") having a place of business at 9410 Key West Avenue, Rockville, MD 20850, its successors, assigns and legal representatives, his/her entire right, title and interest, including the right to sue and collect for all past, present and future damages, for the United States of America, including all its territories and possessions, and all other countries,

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all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

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IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Michele Fiscella

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ping Wei

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
David W. LaFleur

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Henrik S. Olsen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Reinhard Ebner

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
George A. Komatsoulis

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. Rosen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven M. Ruben

Inventor's Signature: Roxanne Duan Date: 1/7/02  
Roxanne D. Duan

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul E. Young

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Kimberly A. Florence

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
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Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jian Ni

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Daniel R. Soppet

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yanggu Shi

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For good and valuable consideration, the receipt of which is hereby acknowledged, each of the undersigned, Michele Fiscella, Ping Wei, David W. LaFleur, Henrik S. Olsen, Kevin P. Baker, Reinhard Ebner, George A. Komatsoulis, Craig A. Rosen, Steven M. Ruben, Roxanne D. Duan, Paul E. Young, Kimberly A. Florence, Paul A. Moore, Charles E. Birse, Jian Ni, Daniel R. Sopper, and Yanggu Shi, , hereby sells, assigns, transfers, and sets over to Human Genome Sciences, Inc. ("Assignee") having a place of business at 9410 Key West Avenue, Rockville, MD 20850, its successors, assigns and legal representatives, his/her entire right, title and interest, including the right to sue and collect for all past, present and future damages, for the United States of America, including all its territories and possessions, and all other countries,

- (a) in and to the invention known as 19 HUMAN SECRETED PROTEINS for which application for United States Letters Patent was filed on April 11, 2001, and assigned US Serial No. 09/832,129, in any and all applications thereon, in any and all Patent(s) therefore, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing (continuation, divisional) applications, reissues, extensions, renewals and reexaminations of the patent application or patent therefor listed above in part (a), to the full extent of the term or terms for which patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals, and examinations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

Each of the undersigned further agrees that said Assignee may apply for and receive patent(s) for said invention(s) in its own name; and agrees to execute all papers necessary in connection with said application(s) and any continuing application(s) (continuation, divisional, or continuation-in-part), substitutes, renewals, reissues, reexaminations, extensions, and all other patent applications on all such invention(s), including all rightful oaths, declarations, powers of attorney and other papers; and agrees to execute separate assignments in connection with such application(s) as the Assignee may deem necessary and expedient; and agrees to communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said invention(s) and the history thereof; and agrees to cooperate fully and completely with said Assignee, its successors, assigns, and representatives in securing, maintaining, and enforcing proper patent protection for said invention(s) and for vesting title to said invention(s) and all patent applications and all patents on said invention(s) in Assignee, its successors, assigns and representatives.

Each of the undersigned agrees to execute all papers necessary in connection with any interference that may be declared or litigation that may be instituted concerning the application(s) or patent(s) referred to above and to cooperate fully and completely with the Assignee, its successors, assigns, and representatives in obtaining evidence and going forward with such interference or litigation, including providing testimonial evidence.

Each of the undersigned hereby represents and warrants to Assignee, its successors, assigns and representatives that no assignment, grant, mortgage, license or other right or agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned and that full right to convey the same as expressed herein is possessed by the undersigned.

Each of the Practitioners at Customer Number 22193 is hereby granted with full power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, this Assignment is executed by the undersigned on the date(s) opposite their signature(s):

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Michele Fiscella

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Ping Wei

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
David W. LaFleur

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Henrik S. Olsen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Kevin P. Baker

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Reinhard Ebner

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
George A. Komatsoulis

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Craig A. Rosen

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven M. Ruben

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Roxanne D. Duan

Inventor's Signature:  \_\_\_\_\_ Date: 2/26/02  
Paul E. Young

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Kimberly A. Flennce

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Paul A. Moore

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Charles E. Birse

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Jian Ni

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Daniel R. Soppet

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Yanggu Shi